

LPTK07A Propane Gas Conversion Kit

Installation Instructions

ATTENTION INSTALLING PERSONNEL:

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual should not supersede existing practices but should be considered as supplemental information.



RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.

Description

This kit is for the purpose of converting Amana Air Command 80 SSE, SV, 90 and 95 furnaces (GUIA, GUIB, GUIC, GCIA, GCIB, GCIC, GCC, GUC, GUD, GUX, GUI, GCIS, GDC, and GCD) and Packaged Gas/Electric Units (PGB**C and PGD**C) from natural to propane gas. Any conversion to propane gas is the responsibility of, and at the risk of, the person making the conversion.



WARNING

PERSONAL INJURY HAZARD

This conversion kit shall be installed by a qualified agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency performing this work assumes responsibility for the proper conversion of this appliance with this kit.



AVERTISSEMENT

Cet ensemble de la conversion sera installé par une agence qualifiée dans accord avec les directives des fabricant et tous codes applicables et exigences de l'autorité ont la juridiction. Si les informations dans ces directives ne sont pas suivies exactement, un feu, explosion ou production de [monoxide] du carbone peut résulter cause propriété endommagé, blessure personnelle ou perte de vie. La représentation de l'agence du service qualifiée ce travail suppose la responsabilité pour la conversion adéquate de cet appareil avec cet ensemble.



WARNING

PERSONAL INJURY HAZARD

To prevent death, personal injury or property damage due to fire or explosion caused by a propane gas leak, install a gas detecting warning device. Since rust can reduce the level of odorant in propane gas, a gas detecting warning device is the only reliable way to detect a propane gas leak. Contact a local propane gas supplier about installing a gas detecting warning device.

IN CANADA "THE CONVERSION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROVINCIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CGS B149.1 AND B149.2 INSTALLATION CODE."



WARNING

PERSONAL INJURY HAZARD

To prevent death, serious personal injury or property damage due to fire or explosion caused by a propane gas leak, install a gas detecting warning device.

If the propane gas furnace is installed in a basement, an excavated area or a confined space, a warning device is required due to:

- Propane gas is heavier than air and any leaking gas can settle in any low areas or confined spaces.
- Propane gas odorant may fade, making the gas undetectable except with a warning device.

If the presence of gas is suspected, follow these instructions:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

This kit includes: installation instructions, propane orifices, valve conversion kits with instructions, conversion rating plate, conversion date certificate, wire ties, and screen/turbulator removal warning tag.

Installation



CAUTION

PERSONAL INJURY HAZARD

The gas supply must be shut off prior to disconnecting the electrical power, before proceeding with the conversion.

1. Remove the gas manifold by removing the burner box front cover (not required on all models), cutting the wire ties, disconnecting the gas valve low voltage wires, and removing the four manifold mounting screws. See Figure 1.

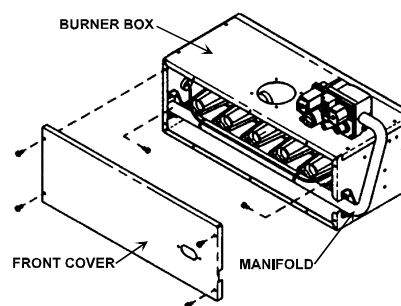


Figure 1
Gas Manifold Removal

2. Replace natural gas orifices with the altitude appropriate propane orifices (Figure 2B) specified in Table 1. Tighten orifices with a box-end wrench. Do not use a socket wrench, as it could damage the orifices. Do not over-tighten. Do not cross thread.

Propane Gas Orifices							
Model	Standard Altitude Data				High Altitude Data		
	Kit Number	Orifice	Altitude (ft)	Pilot Orifice	Kit Number	Orifice	Altitude (ft)
GUIA, GUIB GCIA, GCIB	LPTK07A	#55	0 - 7500	N/A	HALP06	#56	7500 - 11000
GUIC GCIC	LPTK07A	#55	0 - 6000	N/A	HALP06	#56	6000 - 11000
GUC, GUD GUX, GDC GCD, GCC	LPTK07A	#55	0 - 4500	N/A	HALP08	#56	4500 - 9500
PGB**C PGD**C	LPTK07A	#55	0 - 6000	BBR12	HALP06	#56	6000 - 9500
GUIS, GCIS	LPTK07A	#55	0 - 2000*	N/A	N/A	N/A	N/A

* See the Amana Distributor for High Altitude Kits for installations above 2000 feet.

Table 1

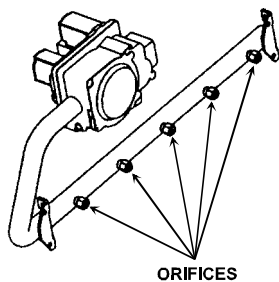


Figure 2A
Replacing Gas Orifices



Figure 2B
Propane Gas Orifices

NOTE: To prevent premature heat exchanger failure, follow the instructions below to remove all metal inserts from the heat exchanger tubes during propane conversions.

3. **PGB**C and PGD**C models only:** Remove pilot tube from gas valve. Remove the screws holding the pilot assembly to the burner tray and remove the assembly. Remove the pilot orifice as shown in Figure 3. Replace the pilot orifice with the orifice provided with the kit, and reassemble in reverse order.

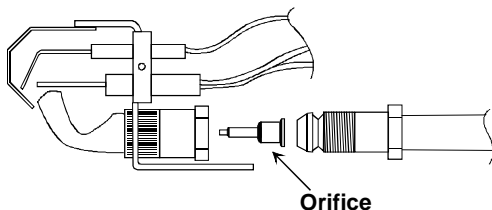


Figure 3
Package Unit Orifice



WARNING

PERSONAL INJURY HAZARD

All metal inserts, screens or turbulators must be removed from the heat exchanger tubes when using propane gas. Failure to comply could cause serious personal injury or death. Failure to comply with this requirement will also void warranty coverage.

4. Remove metal screen inserts from the entrance of the heat exchanger tubes. See Figure 4 and follow the a,b,c directions. Some models do not have metal screen inserts.

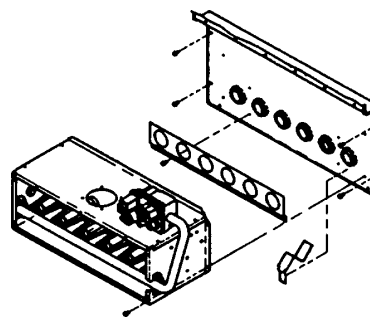


Figure 4
Removal of Metal Screen Inserts

- a) Remove entire burner box assembly, including burners, from the partition panel as one unit.
- b) Hold assembly and remove the screen retention plate and tube inserts from each section of the heat exchanger.
- c) Reinstall the retention plate and entire burner box assembly.
5. Reinstall the gas manifold and reconnect the gas valve low voltage wiring. Install new wire ties making sure that wires do not droop between orifices and burners.

NOTE: To prevent unsatisfactory unit operation, the proper gas conversion kit must be used for each gas valve. Use the White-Rodgers kits only with the White-Rodgers gas valve, and use the Honeywell Spring kit only with the Honeywell gas valve. **THE SPRING KITS ARE NOT INTERCHANGEABLE.**

NOTE: Two stage furnaces do not require a spring kit. Discard all spring kits.

6. On single stage furnaces, replace the gas valve regulator spring with one of two new springs included in this propane conversion kit. If the unit is equipped with a White-Rodgers 36E (except 36E96) gas valve use Spring Kit #92-0659. If the unit is equipped with a Honeywell VR8205 or SV9500 gas valve use Spring Kit #393691-4. In each case, change the regulator spring per instructions included with that particular regulator spring. *Discard unused spring kits.*
7. Leak check orifice threads using a soap solution.



WARNING

PERSONAL INJURY HAZARD

To prevent death, personal injury or property damage due to fire or explosion, do not use a flame to check for leaks.

8. The position of the ignitor, relative to the burner, is not affected by this conversion procedure but the ignitor should be visually inspected for any damage at this point. Reinstall the burner box cover.

9. Check inlet gas pressure. With the power and gas off, connect a water manometer or adequate gauge to the "inlet pressure tap" of the gas valve. With the power and gas on, put the unit into heating cycle and turn on all other gas consuming appliances. For propane gas the inlet gas pressure should be between 11.0 and 13.0 inches W.C.
10. Required input rating at standard altitude:

Single Stage Units Input Ratings (Standard Altitude)		
Model		Input BTU/HR
GUIA, GUIB, GUIC, GCIA, GCIB, GCIC GCD, GDC PGB**C, PGD**C	045	41,400
GUC, GUD, GUX, GCC	045	40,500
GUIA, GUIB, GUIC, GCIA, GCIB, GCIC GCD, GDC PGB**C, PGD**C	070	62,100
GUC, GUD, GUX, GCC	070	63,000
GUIA, GUIB, GUIC, GCIA, GCIB, GCIC GCD, GDC PGB**C, PGD**C	090	82,800
GUC, GUD, GUX, GCC	090	81,000
GUIA, GUIB, GUIC, GCIA, GCIB, GCIC GCD, GDC	115	103,500
GUC, GUD, GUX, GCC	115	103,500
GUIA, GUIB, GUIC, GCIA, GCIB, GCIC	140	124,200

Table 2

Two Stage Units Input Ratings (Standard Altitude)			
Model		High Stage Input BTU/Hr	Low Stage Input BTU/Hr
GUIS, GCIS	70	62,100	48,000
GUIS, GCIS	90	82,800	64,000
GUIS	115	103,500	80,000
GUIS	140	124,200	96,000

Table 3

11. On single stage units, set the manifold pressure to 10.0" W.C. (water column). For direct vent (GUD, GCD) furnaces, see "Setting GUD and GCD Manifold Pressure" before setting pressure (Figure 10).

On two stage units, adjust the high stage manifold pressure to 10.0" W.C. and the low stage manifold pressure to 6.0" W.C. (Figure 7). The White Rodgers 36E96 gas valve requires a 3/32" allen wrench to adjust the manifold pressures.

A tapped opening is provided in the gas valve to facilitate measurement of the manifold pressure. A "U Tube" manometer having a scale range from 0 to 12 inches of water column should be used for this measurement. The manifold pressure must be measured with the burners operating, and with the burner box cover (cover not used on all models) in place.

To adjust the pressure regulator, remove the adjustment screw or cover on the gas valve. Turn out (counterclockwise) to decrease pressure, turn in (clockwise) to increase pressure. Only small variations in gas flow should be made by means of the pressure regulator adjustment. In no case should the final manifold pressure vary more than plus or minus 0.3 inches water column from the specified pressure. Any major changes in flow should be made by changing the size of the burner orifices.

12. Verify the gas input rate by checking that the appropriate orifices have been installed and the manifold pressure has been set as stated in these instructions.
13. The burner flames should be stable, soft and blue (dust may cause orange tips but they must not be yellow). They should extend directly outward from the burners without curling, floating, or lifting off. Check unit temperature rise as described in the installation manual; temperature rise must be within the range shown on the furnace rating plate.
14. Check the normal operating sequence of the ignition system to insure burners light properly.
15. Attach the label (found in the spring kit), indicating propane gas conversion, to the gas valve.
16. Attach conversion data plate, with correct input rating, adjacent to the unit rating plate.
17. Post "conversion date certificate" adjacent to the furnace.

Due to policy of continual product improvement, the right is reserved to change specifications and design without notice.

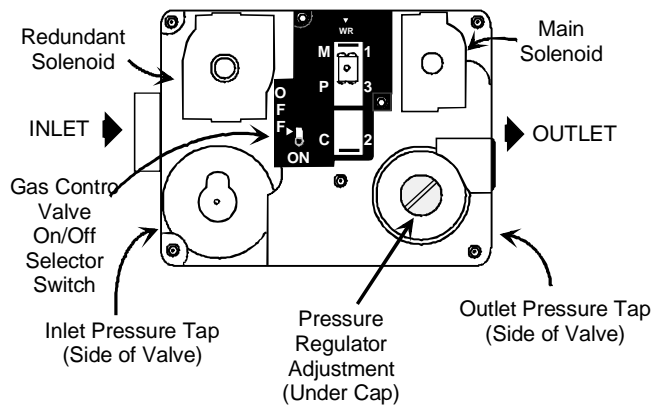


Figure 5
White Rodgers
Model 36E22 or 36E23

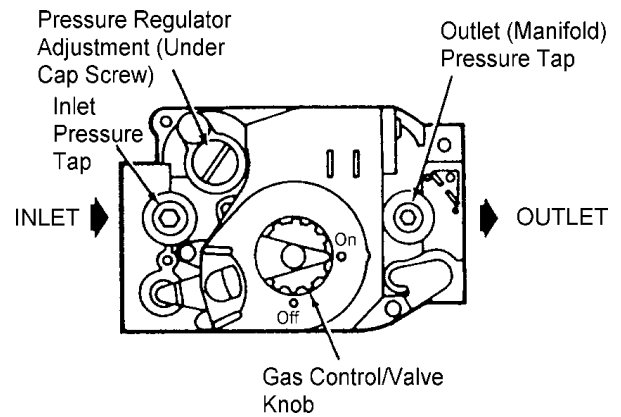


Figure 8
Honeywell
Model VR-8205

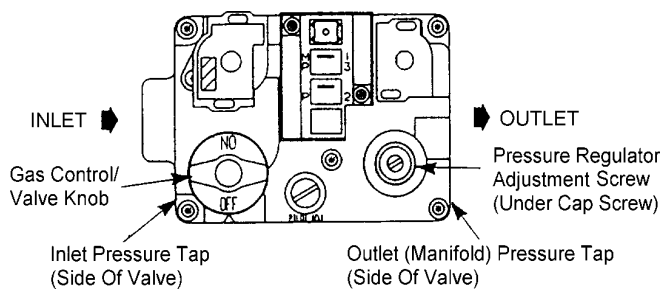


Figure 6
White Rodgers
Model 36E36 or 36E37

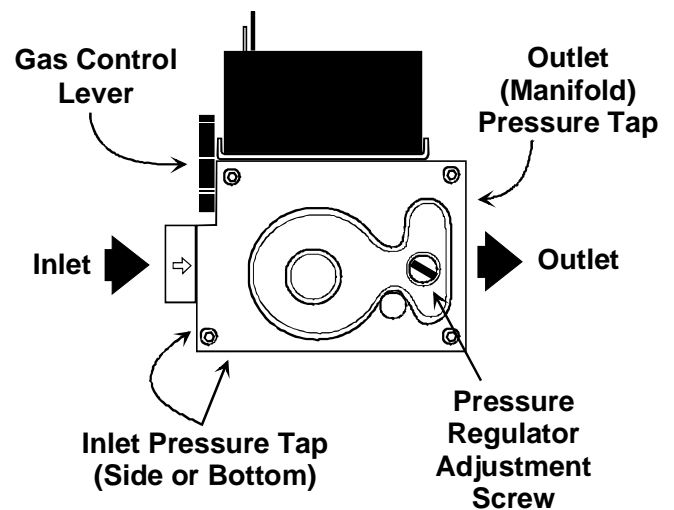


Figure 9
Robertshaw
Model 7222

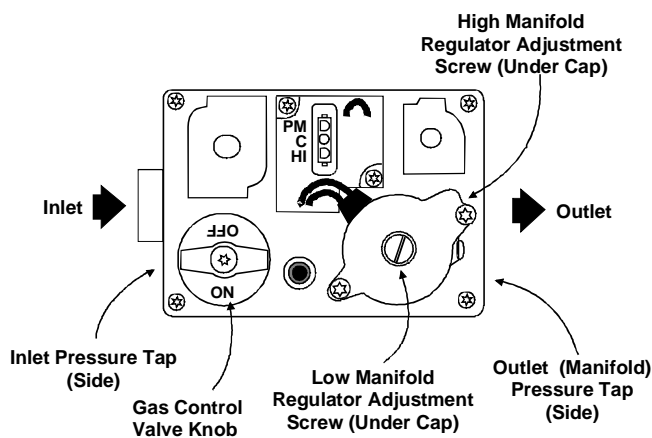


Figure 7
White Rodgers
Model 36E96

Setting GUD and GCD Manifold Pressure

A tapped opening is provided in the gas manifold (Figure 10) to facilitate measurement of the manifold pressure. A "U" tube manometer having a scale range from 0" to 12" W.C. should be used for this measurement. The manifold pressure must be measured with the burners operating and with the shield and air box front cover in place. Adjustment screw cover must be in place when furnace is operating. Be certain the grommet around the manifold tightly seals the air box.



WARNING

To prevent death or personal injury due to carbon monoxide, all hoses must be connected as shown in Figure 10. Failure to connect the hose between the pressure switch and the burner box could result in excessive generation of carbon monoxide.

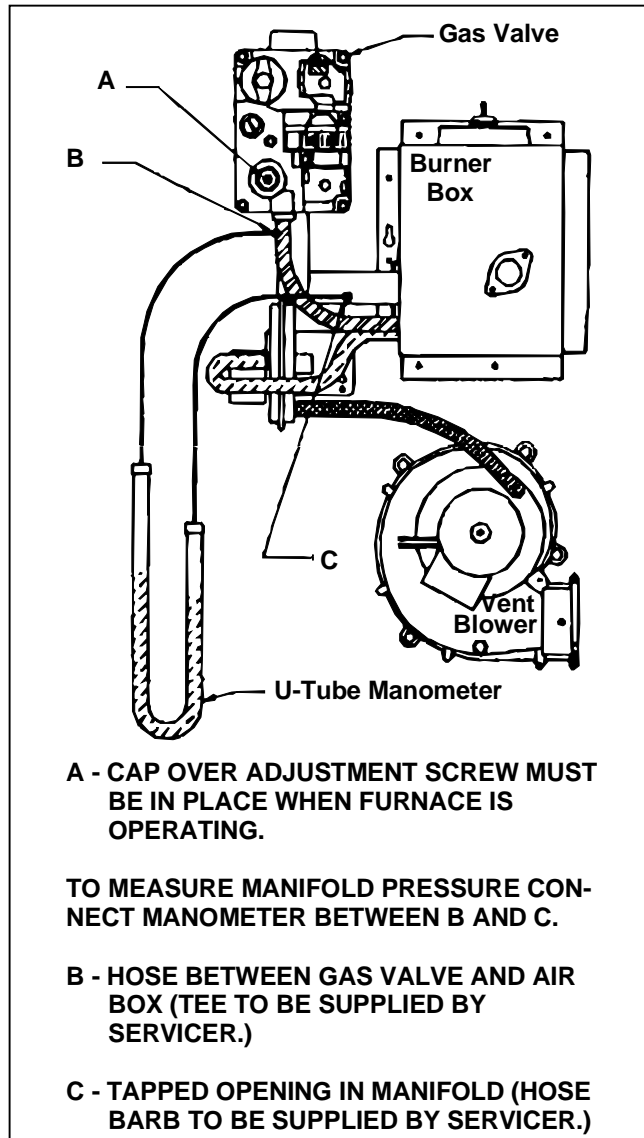


Figure 10